



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,960	08/27/2003	Gary J. Benjamin	10971191-3	4692

22879 7590 09/06/2006

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

MEONSKE, TONIA L

ART UNIT	PAPER NUMBER
----------	--------------

2181

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/648,960	Applicant(s) BENJAMIN ET AL.	
	Examiner Tonia L. Meonske	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11-18 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-8, 11, 18 and 23 is/are allowed.
- 6) ☒ Claim(s) 1-5, 12-17, 21, 22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/27/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. [1] as follows:

2. It is noted that this application appears to claim subject matter disclosed in prior Application No. 09/490,395, filed January 24, 2000, now US Patent 6,622,238. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage

Art Unit: 2181

commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

3. If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference

Art Unit: 2181

in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

6. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

7. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 2, 3, 4, 5, 12, 13, 14, 15, 16, 17, 21, 22 and 24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 1, 4, 13, 14, 15, 13, 16, 17, 5, 6 and 17, respectively of U.S. Patent No. 6,622,238.

Art Unit: 2181

9. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application 1, 2, 3, 4, 5, 12, 13, 14, 15, 16, 17, 21, 22 and 24 are anticipated by the patented claims 1, 2, 3, 1, 4, 13, 14, 15, 13, 16, 17, 5, 6 and 17, respectively, in that the patented claims contain all of the limitations of claims of the instant application. The claims of the instant application therefore are not patently distinct from the earlier patent claims and as such are unpatentable for obvious-type double patenting.

10. Claim 25 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 17 of U.S. Patent No. 6,622,238. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 25 differs from claim 17 in that claim 25 states that the circuitry comprises a latch configured to receive said selected value and to output said selected predicate value and wherein said plurality of predicate values includes an output value of said latch. This claimed latch is already present in claim 17 as a register. A register is a specific type of Latch, so the register as claimed in lines 6 and 9 of claim 17 is equivalent to the claimed latch in claim 25 since the register receives a written value and outputs the value to a selecting mechanism as one of the plurality of predicate values. The new predicate value and the predicate value read from said register of claim 17 are equivalent to the plurality of predicate values in claim 25. Claim 25 also differs from claim 17 by stating, "to output said selected predicate value based on a clock signal." However, in a clocked computer system, all data values are output based on a clock for the desirable purpose of synchronizing operations and data. It would

Art Unit: 2181

have been obvious to one of ordinary skill in the art at the time the invention was made to have the system of claim 17 be clocked in order to synchronize operations and data.

Official Notice has been taken.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

12. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

13. Claims 1, 2, 3, 5, 24 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Arora, US Patent 6,442,678 (herein after “Arora”).

14. Referring to claim 1, Arora has taught a computer system for processing instructions of computer programs, comprising:

- a. a register (Figure 1, element 106, column 3, lines 28-32);

- b. a pipeline configured to execute instructions of a computer program, said pipeline having a first stage and a second stage (Figure 1, elements 101 and 102, column 3, lines 39-44, column 4, lines 28-47); and
- c. circuitry (Figure 1) configured to read a first predicate value from said register and to receive a second predicate value (Figure 1, The input wires to the multiplexers 111, 112 and 113 read first predicate values from registers in element 106 and the second predicate values from data paths 121, 122 and 123.), said circuitry configured to transmit, to said first stage, said first predicate value (Figure 1, The input wires transmit said first predicate values to multiplexers 111, 112 and 113. Elements 111, 112 and 113 are in the first stage.) and to select between said second predicate value and said first predicate value read from said register (Figure 1, elements 111, 112 and 113 select between the predicate values.), said circuitry further configured to transmit said selected predicate value to said second stage (Figure 1, The selected predicate values are transmitted to the second stage, element 102, including elements 121, 122 and 123 through elements 141, 142 and 143.).
15. Referring to claim 2, Arora has taught the system of claim 1, as described above, and wherein said one predicate value selected by said circuitry is said first predicate value read from said register (column 7, lines 32-36, column 4, lines 28-47).
16. Referring to claim 3, Arora has taught the system of claim 1, as described above, and wherein said one predicate value selected by said circuitry is said second predicate value (column 7, lines 32-36, column 4, lines 28-47).

Art Unit: 2181

17. Referring to claim 5, Arora has taught the system of claim 1, as described above, and wherein said circuitry includes a latch that is configured to receive said selected predicate value and to transmit said selected predicate value to said second stage in response to an edge of a clock signal (Figure 1, The selected predicate values are transmitted to the second stage, element 102, including elements 121, 122 and 123 through elements 141, 142 and 143. The system is clocked, so this transmission to the second stage occurs in response to an edge of a clock signal.).

18. Referring to claim 24, Arora has taught a system for processing instructions of computer programs, comprising:

- a. a pipeline configured to execute an instruction of a computer program, said pipeline having a first stage and a second stage (Figure 1, elements 101 and 102, column 3, lines 39-44, column 4, lines 28-47); and
- b. circuitry (Figure 1) configured to read a first predicate value from a register (Figure 1, The input wires to the multiplexers 111, 112 and 113 read first predicate values from registers in element 106.) and to transmit, to said first stage, said first predicate value read from said register (Figure 1, The input wires transmit said first predicate values to multiplexers 111, 112 and 113. Elements 111, 112 and 113 are in the first stage.), said circuitry configured to select one predicate value among a plurality of predicate values (Figure 1, elements 111, 112 and 113 select between the predicate values.), said plurality of predicate values including said first predicate value read from said register (Figure 1, The value from element 106.), said circuitry further configured to transmit said

Art Unit: 2181

selected predicate value to said second stage (Figure 1, The selected predicate values are transmitted to the second stage, element 102, including elements 121, 122 and 123 through elements 141, 142 and 143.),

c. wherein said first stage is configured to process said instruction based on said first predicate value transmitted to said first stage, and wherein said second stage is configured to process said instruction based on said selected predicate value (Figure 1, column 3, line 39-column 4, line 47).

19. Referring to claim 25, Arora has taught the system of claim 24, as described above, and wherein said circuitry comprises a latch configured to receive said selected predicate value (Figure 1, element 141, 142 and 143) and to output said selected predicate value based on a clock signal (Figure 1, column 3, line 39-column 4, line 47, The system is clocked, so elements 141, 142 and 143 output values based on a clock signal.), and wherein said plurality of predicate values includes an output value of said latch (Figure 1, Each multiplexer selects a predicate value from a plurality of elements. The selected value is sent to a latch, element 141, 142 or 143, and is output to a data path, element 121, 122 or 123. Therefore the plurality of predicate values necessarily includes a value that will be output from a latch, either element 141, 142 or 143.).

Allowable Subject Matter

20. Claims 6, 7, 8, 11, 18 and 23 are allowed.

21. Claims 4, 21, 22, 12-17, 24 and 25 are only rejected under the non-statutory double patenting rejections above. A properly filed terminal disclaimer would make claims 12-17, 24 and 25 allowable and claims 4, 21 and 22 would be objected to as

Art Unit: 2181

being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. The following is a statement of reasons for the indication of allowable subject matter:

- a. Referring to claim 6, the prior art of record has not taught or suggested as obvious "second circuitry coupled to said connection and to said second stage, said second circuitry configured to simultaneously receive a second plurality of predicate values " in combination with the claimed register, pipeline, first circuitry and other second circuitry limitations.
- b. Referring to claim 12, the prior art of record has not taught or suggested as obvious "receiving a new predicate value; selecting, based on said control signal, between said new predicate value and said predicate value read from said register in said reading step; transmitting said predicate value selected in said selecting step to said second stage of said pipeline" in combination with the claimed providing, producing, writing, receiving, reading, transmitting and processing limitations.
- c. Referring to claim 18, the prior art of record has not taught or suggested as obvious "transmitting said predicate value selected among said second plurality of predicate values to said second stage of said pipeline" in combination with the claimed providing, reading, simultaneously receiving, selecting, transmitting and processing steps.

Art Unit: 2181

d. Referring to claim 21, the prior art of record has not taught or suggested as obvious "wherein said second predicate value is received by said circuitry from another latch" in combination with the claimed register, pipeline and circuitry.

e. Referring to claim 22, the prior art of record has not taught or suggested as obvious "wherein said second predicate value is received by said circuitry from said latch" in combination with the claimed register, pipeline and circuitry.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tonia L. Meonske whose telephone number is (571) 272-4170. The examiner can normally be reached on Monday-Friday with first Friday's off.

24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2181

TONIA L. MEONSKE

Tonia L. Meonske August 30, 2006

tlm TLM